Service Schematics



Introduction

RH-73

Exploded view and component disposal

IMPORTANT:

This document is intended for use by authorized NOKIA service centers only.

"Service Schematics" was created with focus on customer care.
The purpose of this document is to provide further technical repair information for NOKIA mobile phones on Level 3/4 service activities.
It contains additional information such as e.g. "Component finder", "Frequency band table" or "Antenna switch table".
The "Signal overview" page gives a good and fast overview about the most important signals and voltages on board.
Saving process time and improving the repair quality is the aim of this document.
It is to be used additionally to the service manual and other training or service information such as Service Bulletins.

All measurements were made using following equipment:

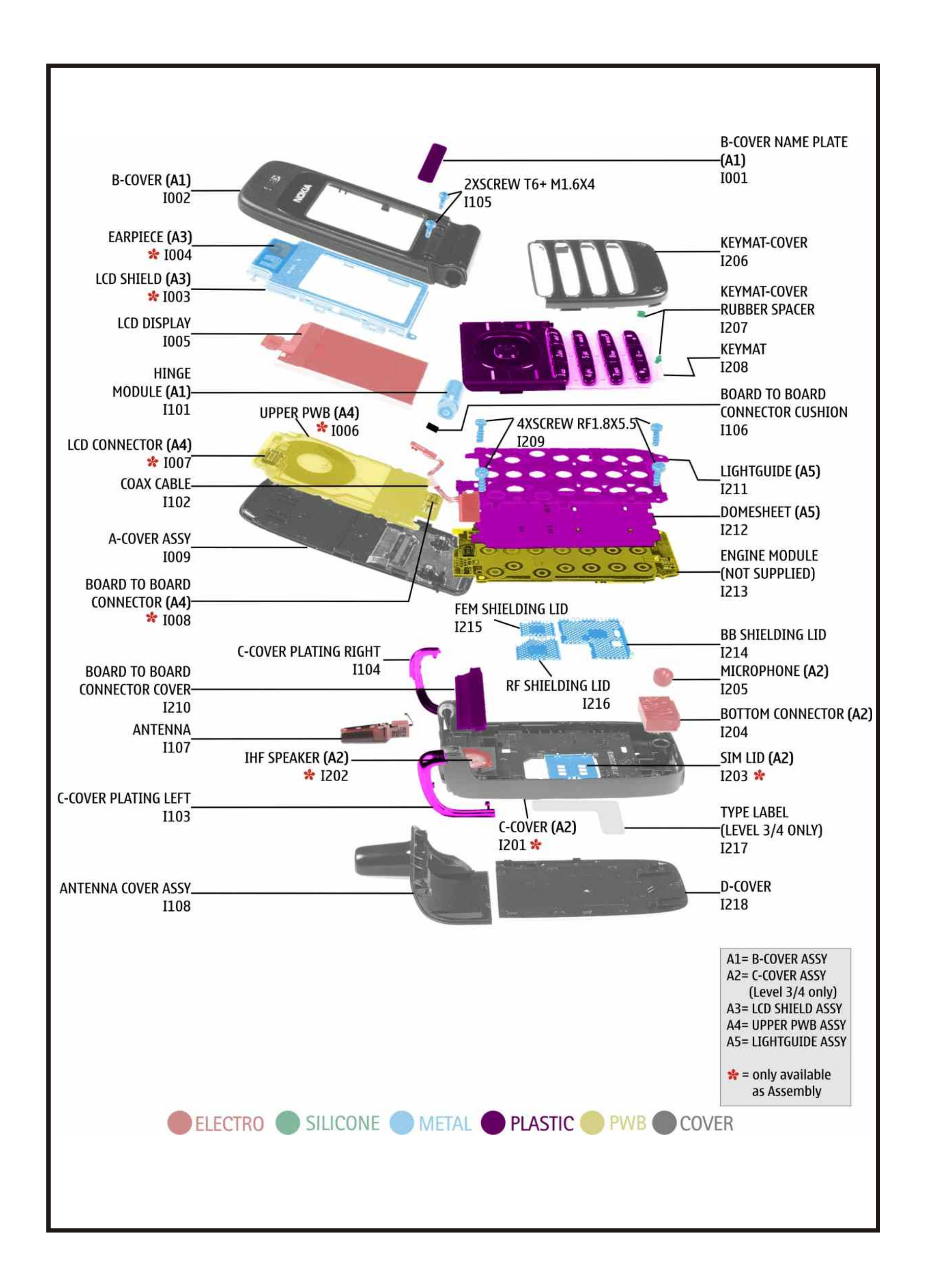
Nokia repair SW	:	Phoenix version 2005.12.5.90
Oscilloscope	:	Fluke PM 3380A/B
Spectrum Analyzer	:	Advantest R3162 with an analog probe
RF-Generator / GSM Tester	:	Rhode & Schwarz CMU 200
Multimeter	:	Fluke 73 Series II

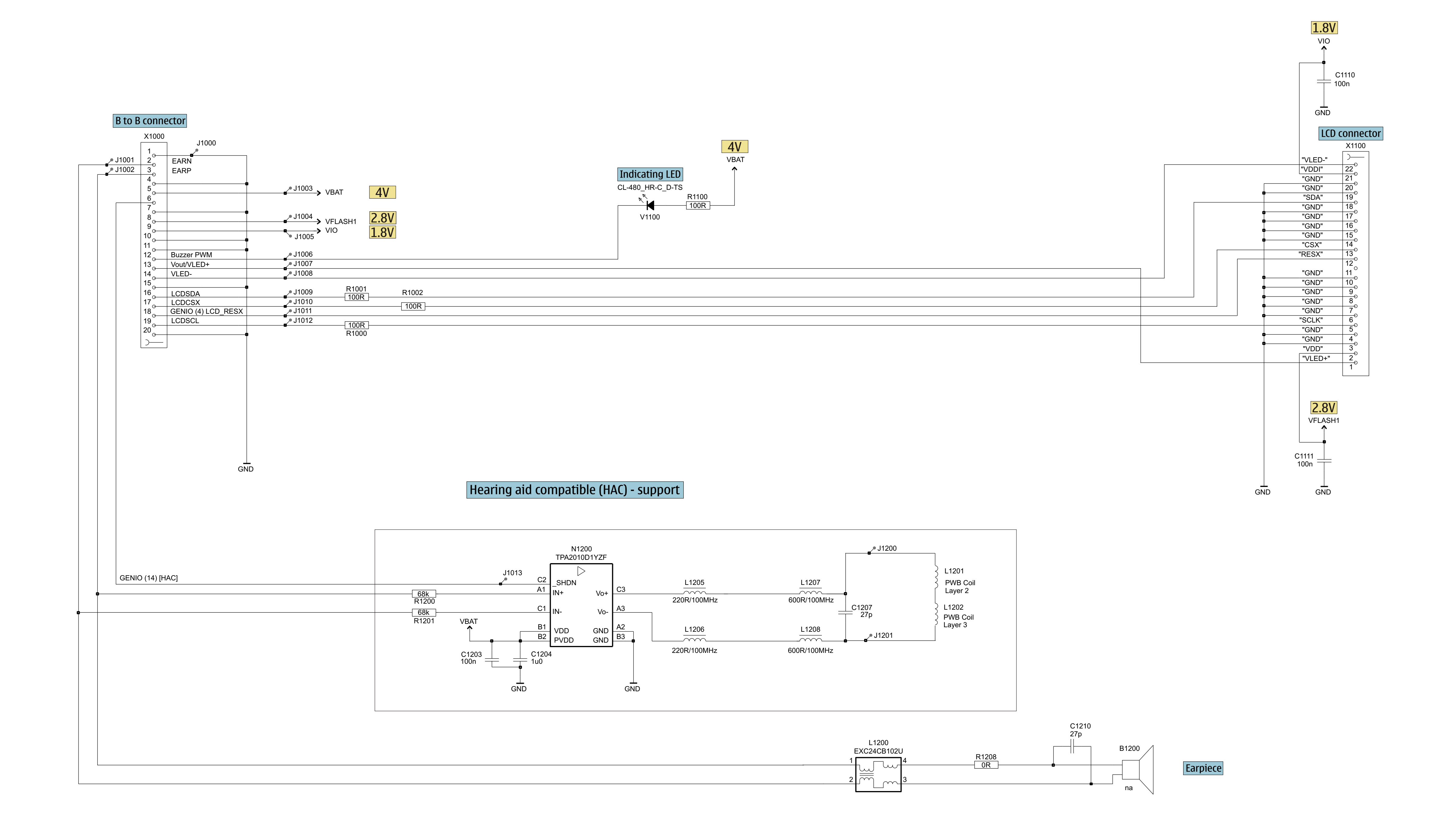
While every endeavour has been made to ensure the accuracy of this document, some errors may exist. If the reader finds any errors, NOKIA should be notified in writing.

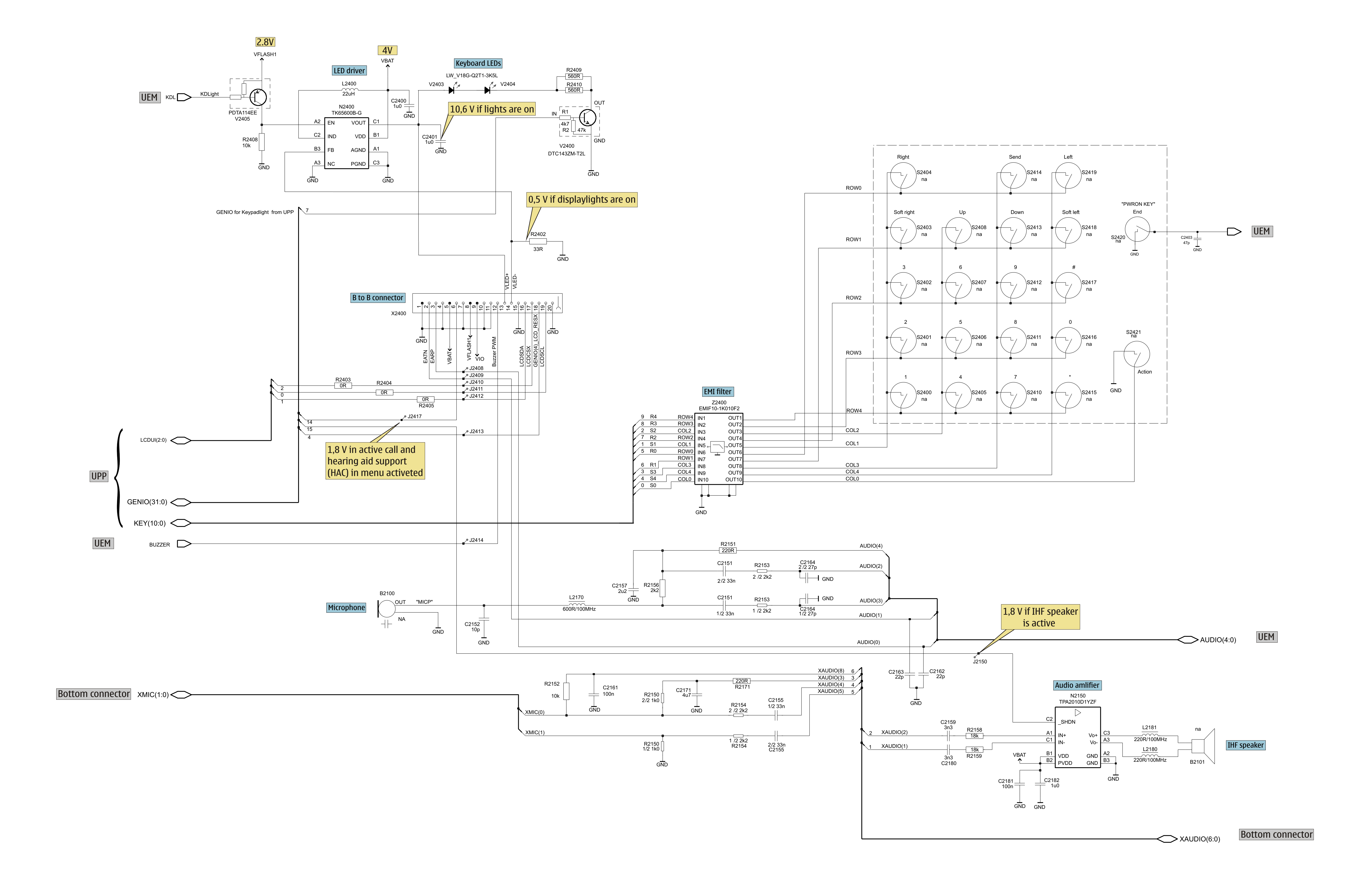
Please send E-Mail to: training.sace@nokia.com

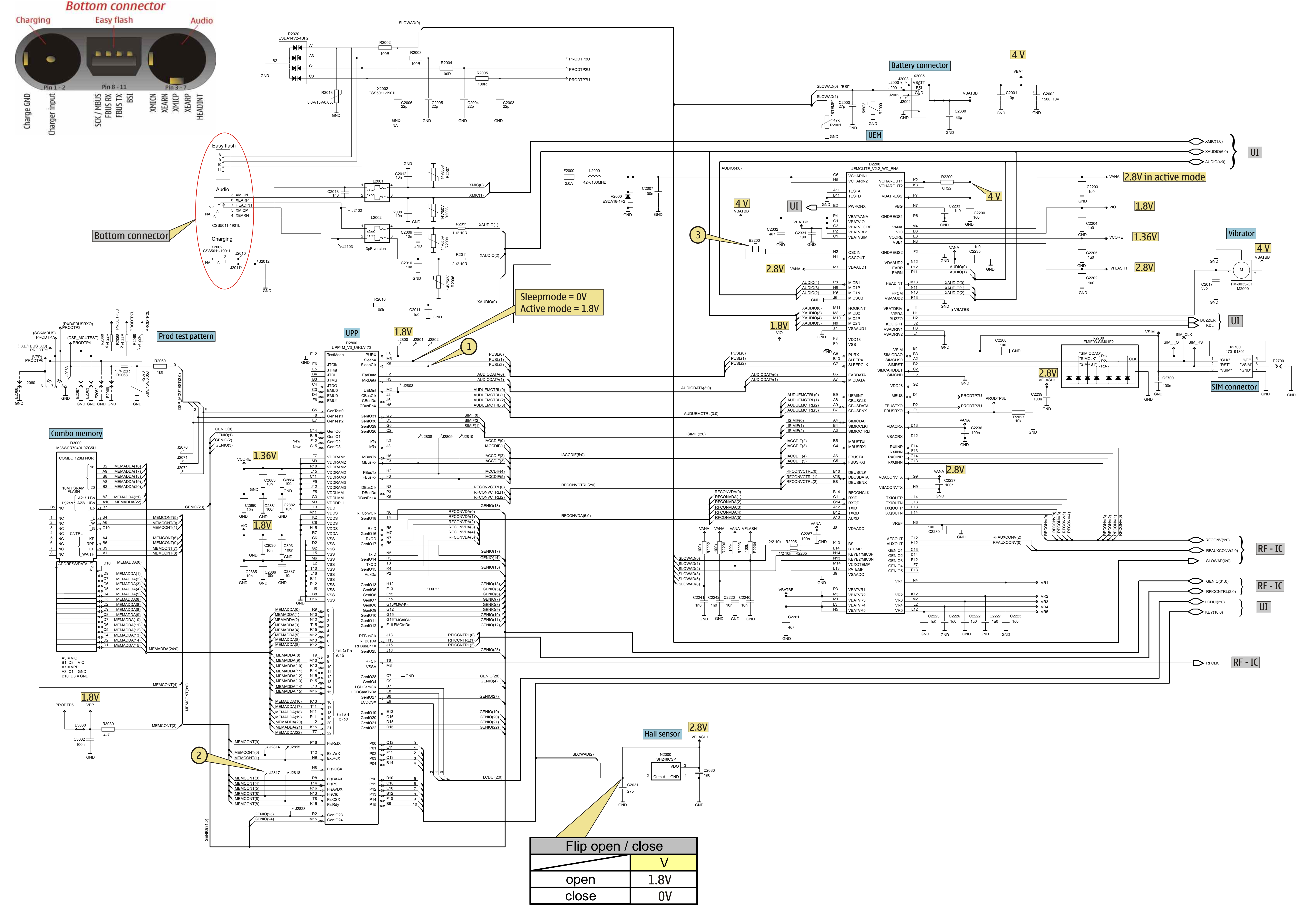


Table of Contents

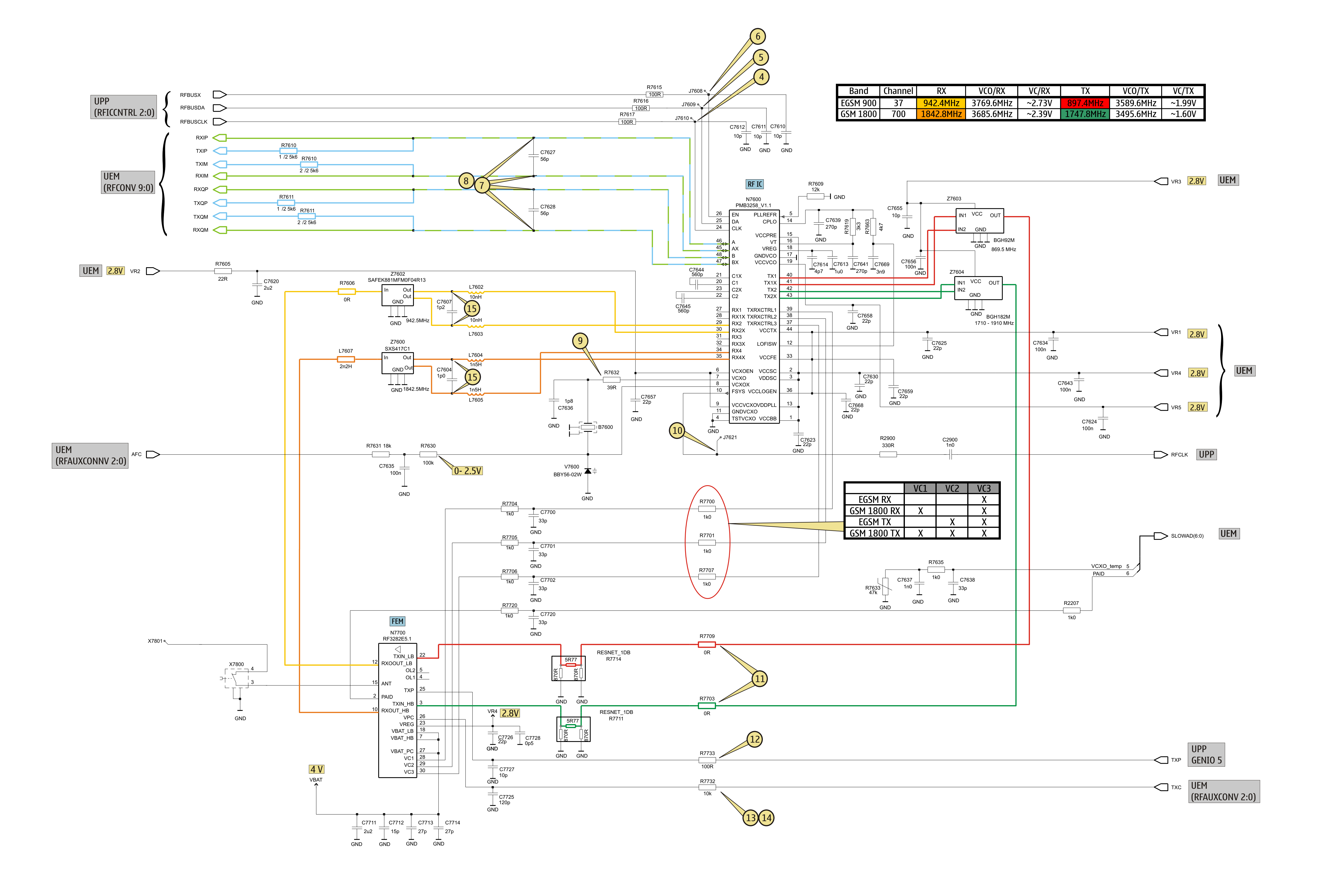



B to B connector
X1000
EARN
EARP
Buzzer PWM
Vout/VLED+
VLED-
LCDSDA
LCDCSX
GENIO (4) LCD_RESX
LCDSCL
VBAT
4V
VFLASH1
2.8V
VIO
1.8V
GND
Indicating LED
CL-480_HR-C_D-TS
V1100
R1100
100R
R1001
R1002
R1000
LCD connector
X1100
C1110
100n
C1111
100n
Hearing aid compatible (HAC) - support
GENIO (14) [HAC]
N1200
TPA2010D1YZF
_SHDN
IN+
IN-
VDD
PVDD
Vo+
Vo-
R1200
68k
R1201
C1203
100n
C1204
1u0
L1205
220R/100MHz
L1206
L1207
600R/100MHz
L1208
C1207
27p
L1201
PWB Coil
Layer 2
L1202
PWB Coil
Layer 3
L1200
EXC24CB102U
R1208
0R
C1210
27p
B1200
Earpiece


2.8V
VFLASH1
4V
VBAT
LED driver
Keyboard LEDs
UEM
KDL
KDLight
PDTA114EE
V2405
L2400
22uH
N2400
TK65600B-G
C2400
1u0
GND
V2403
LW_V18G-Q2T1-3K5L
V2404
R2409
560R
R2410
560R
OUT
10,6 V if lights are on
IN
R1
4k7
R2
47k
V2400
DTC143ZM-T2L
C2401
1u0
R2408
10k
0,5 V if displaylights are on
GENIO for Keypadlight from UPP
R2402
33R
VLED+
VLED-
B to B connector
X2400
EATN
EARP
VBAT
VFLASH1
VIO
Buzzer PWM
LCDSDA
LCDCSX
GENIO(4) LCD_RESX
LCDSCL
R2403
0R
R2404
0R
R2405
0R
J2408
J2409
J2410
J2411
J2412
J2417
J2413
1,8 V in active call and
hearing aid support
(HAC) in menu activeted
LCDUI(2:0)
UPP
GENIO(31:0)
KEY(10:0)
UEM
BUZZER
J2414
EMI filter
Z2400
EMIF10-1K010F2
ROW0
ROW1
ROW2
ROW3
ROW4
COL2
COL1
COL3
COL4
COL0
Right
Send
Left
Soft right
Up
Down
Soft left
"PWRON KEY"
End
S2420
na
C2403
47p
UEM
Action
S2421
R2151
220R
AUDIO(4)
C2151
2/2 33n
R2153
2 /2 2k2
C2164
2/2 27p
AUDIO(2)
C2157
2u2
R2156
2k2
AUDIO(3)
AUDIO(1)
AUDIO(0)
Microphone
B2100
OUT
"MICP"
NA
L2170
600R/100MHz
C2152
10p
1,8 V if IHF speaker
is active
AUDIO(4:0)
UEM
J2150
C2163
22p
C2162
22p
R2152
10k
C2161
100n
R2150
2/2 1k0
C2171
4u7
R2171
220R
R2154
2 /2 2k2
C2155
1/2 33n
XAUDIO(8)
XAUDIO(3)
XAUDIO(4)
XAUDIO(5)
Bottom connector
XMIC(1:0)
XMIC(0)
XMIC(1)
R2150
1/2 1k0
Audio amlifier
N2150
TPA2010D1YZF
_SHDN
XAUDIO(2)
XAUDIO(1)
C2159
3n3
R2158
18k
C2180
3n3
R2159
18k
VBAT
C2181
100n
C2182
1u0
L2181
220R/100MHz
L2180
220R/100MHz
na
IHF speaker
B2101
XAUDIO(6:0)
Bottom connector

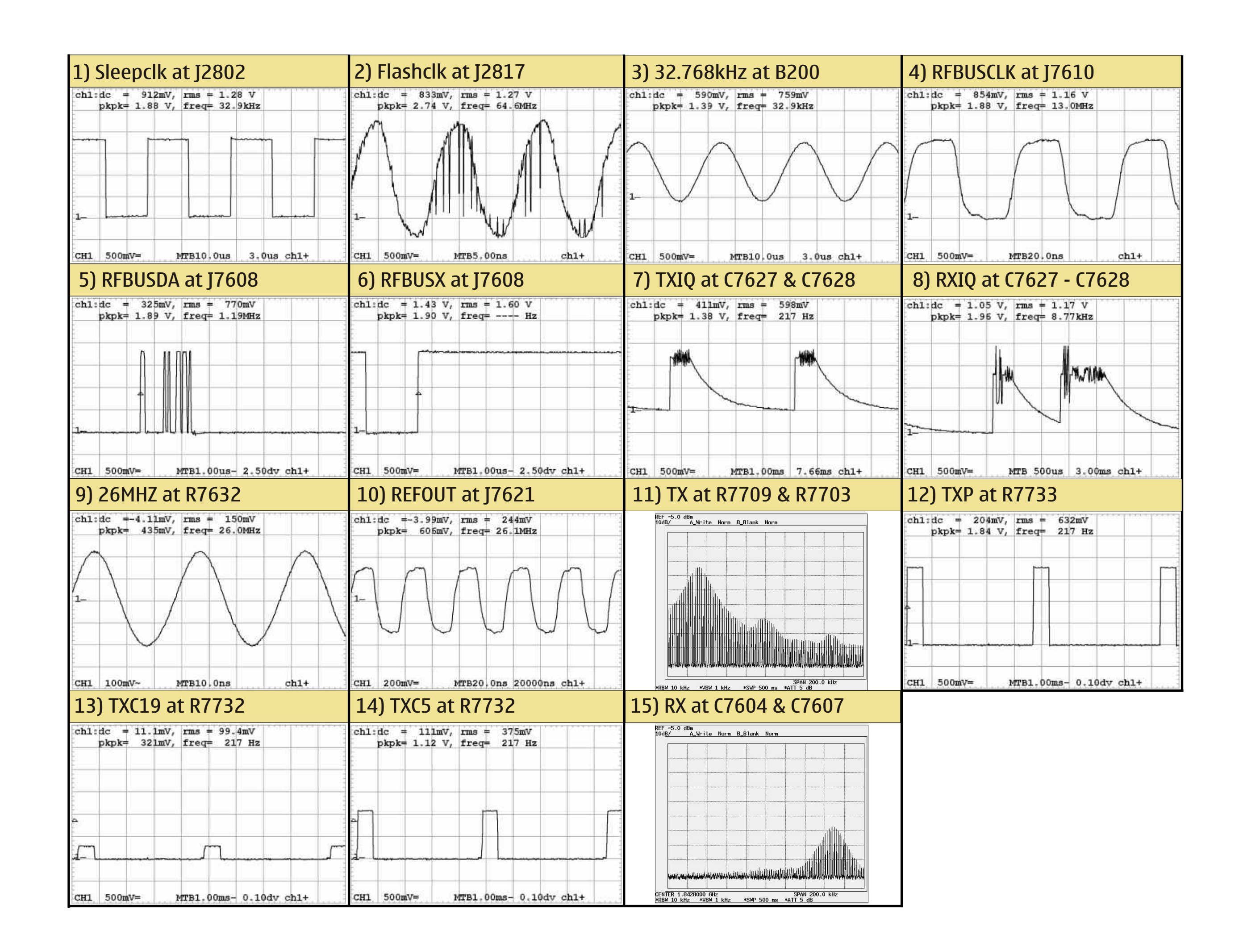


Flip open / close	V
open	1.8V
close	0V

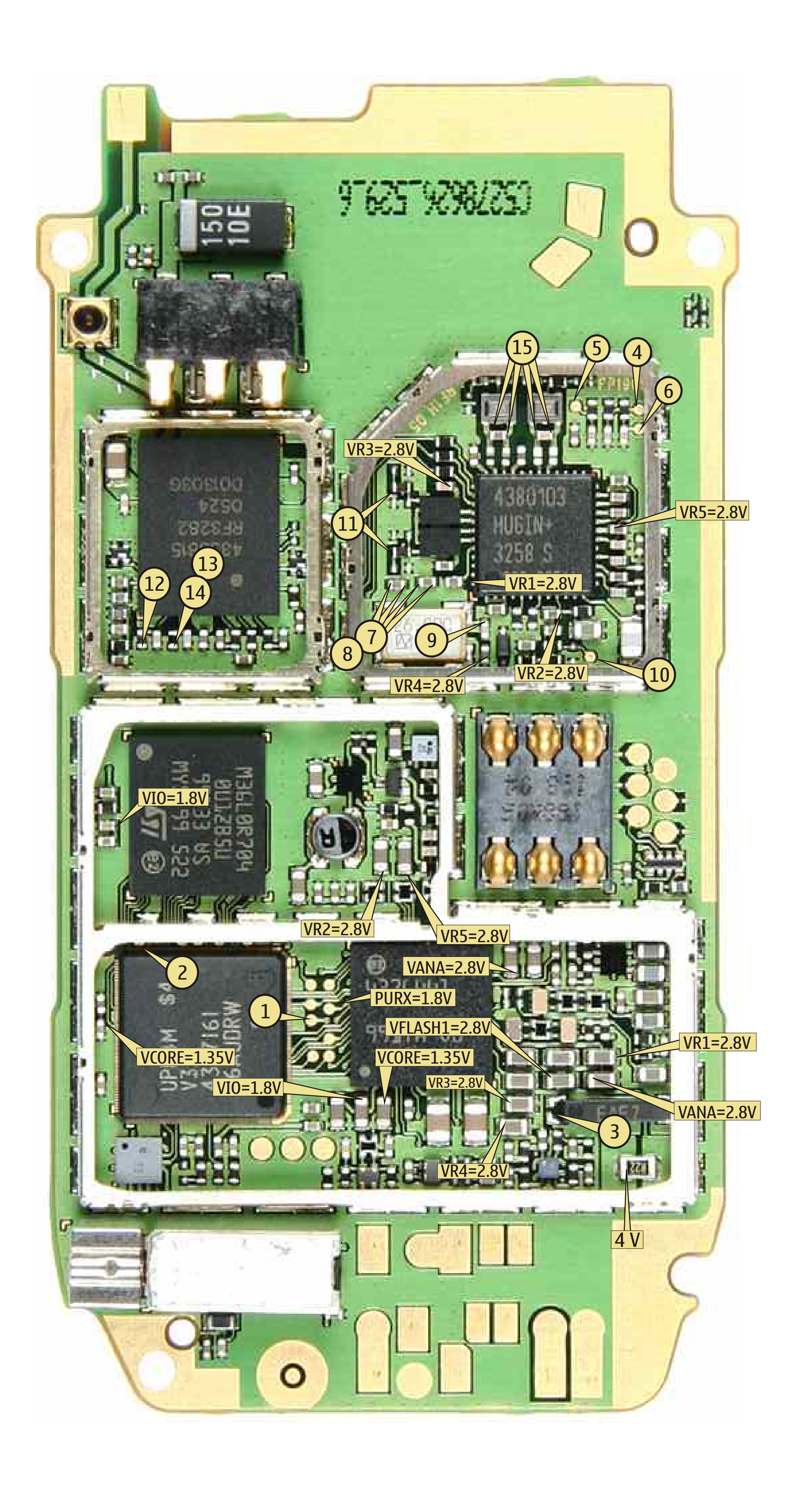


Band	Channel	RX	VCO/RX	VC/RX	TX	VCO/TX	VC/TX
EGSM 900	37	942.4MHz	3769.6MHz	~2.73V	897.4MHz	3589.6MHz	~1.99V
GSM 1800	700	1842.8MHz	3685.6MHz	~2.39V	1747.8MHz	3495.6MHz	~1.60V

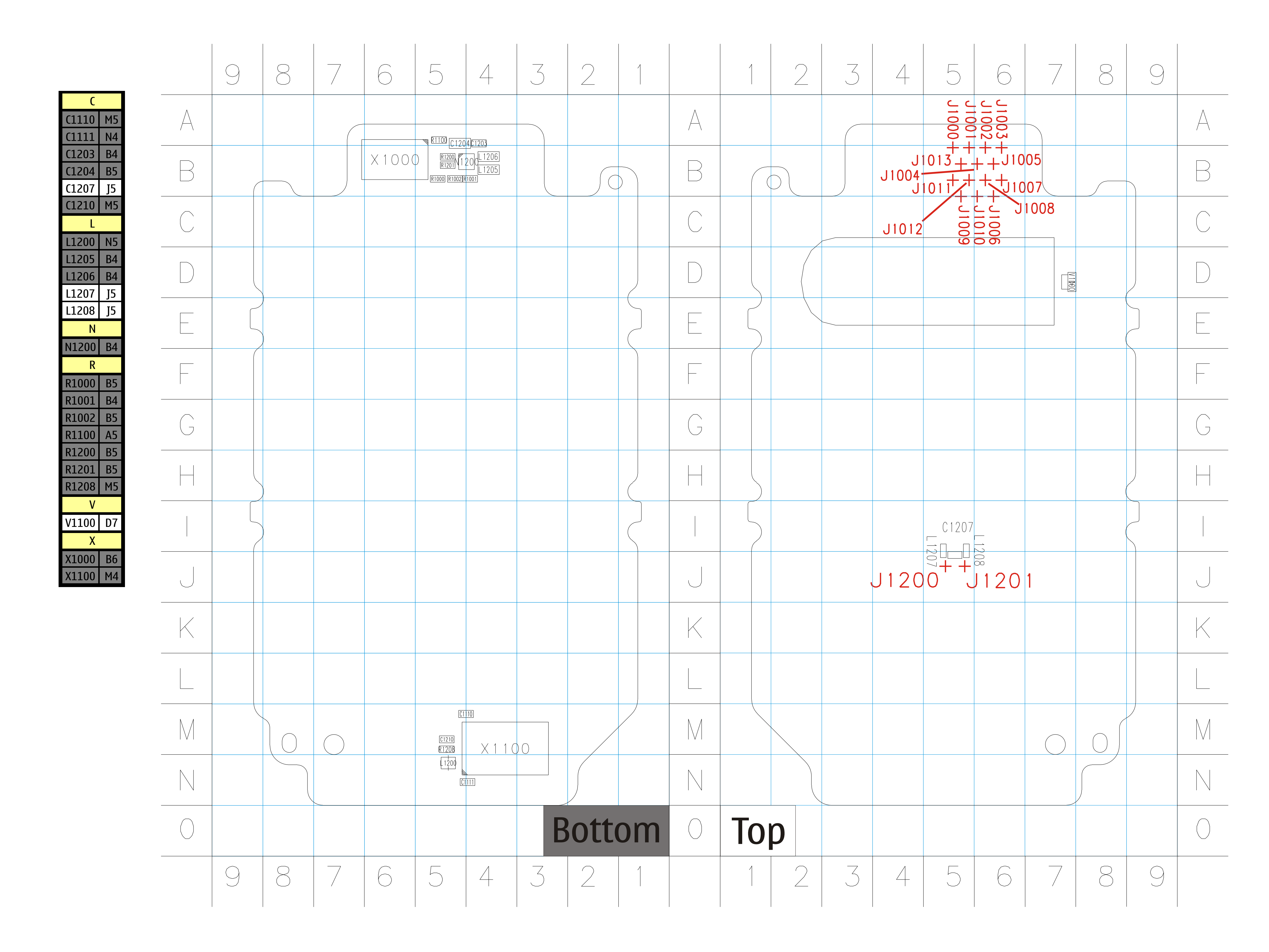
	VC1	VC2	VC3
EGSM RX			X
GSM 1800 RX	X		X
EGSM TX		X	X
GSM 1800 TX	X	X	X



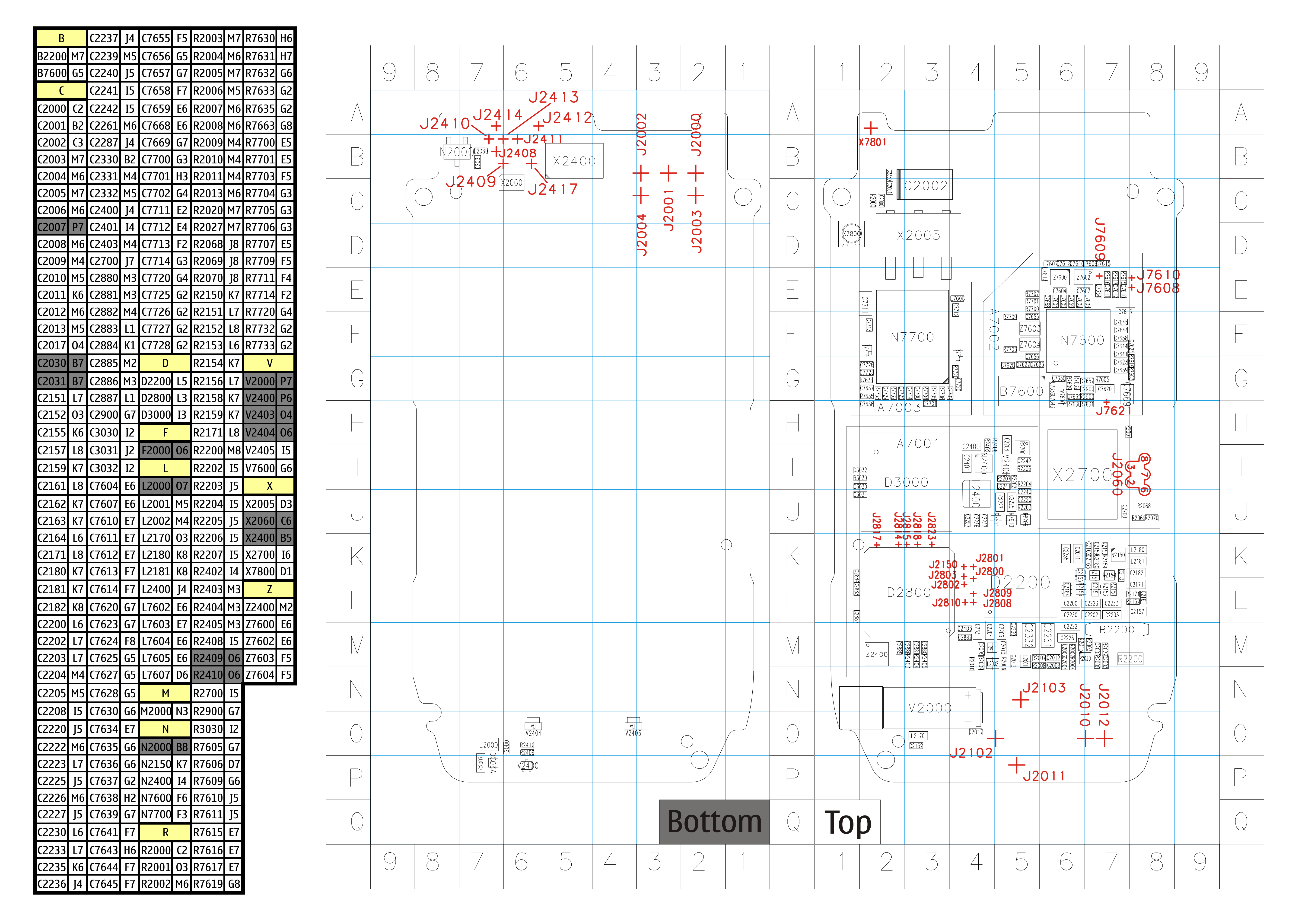
1) Sleepclk at J2802
2) Flashclk at J2817
3) 32.768kHz at B200
4) RFBUSCLK at J7610
5) RFBUSDA at J7608
6) RFBUSX at J7608
7) TXIQ at C7627 & C7628
8) RXIQ at C7627 - C7628
9) 26MHZ at R7632
10) REFOUT at J7621
11) TX at R7709 & R7703
12) TXP at R7733
13) TXC19 at R7732
14) TXC5 at R7732
15) RX at C7604 & C7607



VR3=2.8V
VR5=2.8V
VR1=2.8V
VR4=2.8V
VR2=2.8V
VIO=1.8V
VR2=2.8V
VR5=2.8V
VANA=2.8V
PURX=1.8V
VFLASH1=2.8V
VR1=2.8V
VCORE=1.35V
VCORE=1.35V
VIO=1.8V
VR3=2.8V
VANA=2.8V
VR4=2.8V
4 V



C	
C1110	M5
C1111	N4
C1203	B4
C1204	B5
C1207	J5
C1210	M5
L	
L1200	N5
L1205	B4
L1206	B4
L1207	J5
L1208	J5
N	
N1200	B4
R	
R1000	B5
R1001	B4
R1002	B5
R1100	A5
R1200	B5
R1201	B5
R1208	M5
V	
V1100	D7
X	
X1000	B6
X1100	M4



B		C2237	J4	C7655	F5	R2003	M7	R7630	H6
B2200	M7	C2239	M5	C7656	G5	R2004	M6	R7631	H7
B7600	G5	C2240	J5	C7657	G7	R2005	M7	R7632	G6
C		C2241	I5	C7658	F7	R2006	M5	R7633	G2
C2000	C2	C2242	I5	C7659	E6	R2007	M6	R7635	G2
C2001	B2	C2261	M6	C7668	E6	R2008	M6	R7663	G8
C2002	C3	C2287	J4	C7669	G7	R2009	M4	R7700	E5
C2003	M7	C2330	B2	C7700	G3	R2010	M4	R7701	E5
C2004	M6	C2331	M4	C7701	H3	R2011	M4	R7703	F5
C2005	M7	C2332	M5	C7702	G4	R2013	M6	R7704	G3
C2006	M6	C2400	J4	C7711	E2	R2020	M7	R7705	G3
C2007	P7	C2401	I4	C7712	E4	R2027	M7	R7706	G3
C2008	M6	C2403	M4	C7713	F2	R2068	J8	R7707	E5
C2009	M4	C2700	J7	C7714	G3	R2069	J8	R7709	F5
C2010	M5	C2880	M3	C7720	G4	R2070	J8	R7711	F4
C2011	K6	C2881	M3	C7725	G2	R2150	K7	R7714	F2
C2012	M6	C2882	M4	C7726	G2	R2151	L7	R7720	G4
C2013	M5	C2883	L1	C7727	G2	R2152	L8	R7732	G2
C2017	O4	C2884	K1	C7728	G2	R2153	L6	R7733	G2
C2030	B7	C2885	M2	D		R2154	K7	V	
C2031	B7	C2886	M3	D2200	L5	R2156	L7	V2000	P7
C2151	L7	C2887	L1	D2800	L3	R2158	K7	V2400	P6
C2152	O3	C2900	G7	D3000	I3	R2159	K7	V2403	O4
C2155	K6	C3030	I2	F		R2171	L8	V2404	O6
C2157	L8	C3031	J2	F2000	O6	R2200	M8	V2405	I5
C2159	K7	C3032	I2	L		R2202	I5	V7600	G6
C2161	L8	C7604	E6	L2000	O7	R2203	J5	X	
C2162	K7	C7607	E6	L2001	M5	R2204	I5	X2005	D3
C2163	K7	C7610	E7	L2002	M4	R2205	J5	X2060	C6
C2164	L6	C7611	E7	L2170	O3	R2206	I5	X2400	B5
C2171	L8	C7612	E7	L2180	K8	R2207	I5	X2700	I6
C2180	K7	C7613	F7	L2181	K8	R2402	I4	X7800	D1
C2181	K7	C7614	F7	L2400	J4	R2403	M3	Z	
C2182	K8	C7620	G7	L7602	E6	R2404	M3	Z2400	M2
C2200	L6	C7623	G7	L7603	E7	R2405	M3	Z7600	E6
C2202	L7	C7624	F8	L7604	E6	R2408	I5	Z7602	E6
C2203	L7	C7625	G5	L7605	E6	R2409	O6	Z7603	F5
C2204	M4	C7627	G5	L7607	D6	R2410	O6	Z7604	F5
C2205	M5	C7628	G5	M		R2700	I5		
C2208	I5	C7630	G6	M2000	N3	R2900	G7		
C2220	J5	C7634	E7	N		R3030	I2		
C2222	M6	C7635	G6	N2000	B8	R7605	G7		
C2223	L7	C7636	G6	N2150	K7	R7606	D7		
C2225	J5	C7637	G2	N2400	I4	R7609	G6		
C2226	M6	C7638	H2	N7600	F6	R7610	J5		
C2227	J5	C7639	G7	N7700	F3	R7611	J5		
C2230	L6	C7641	F7	R		R7615	E7		
C2233	L7	C7643	H6	R2000	C2	R7616	E7		
C2235	K6	C7644	F7	R2001	O3	R7617	E7		
C2236	J4	C7645	F7	R2002	M6	R7619	G8		